3.3.3.3 Dry-Mesic Prairie

3.3.3.3.1 Community Overview

Historically, this grassland community was common in parts of southern Wisconsin, occurring on slightly less droughty sites than dry prairie. Today, this community type is rare because of conversion to agricultural uses or the encroachment of woody vegetation due to the lack of wildfire. Dry-mesic prairie has many of the same grasses as dry prairie, but taller species such as big bluestem and Indian-grass dominate. Needle grass and prairie drop-seed may also be present. The herb component is more diverse than in dry prairies, as it may include many species that occur in both dry and mesic prairies. Composites and legumes are particularly well-represented in relatively undisturbed stands.

Soils are often somewhat sandy, either loamy sands or sandy loams. The landscape associations that can support this type include terraces on the margins of large river valleys, sandy outwash deposits, gravelly moraines, and the lower slopes of Driftless Area bluffs. As with the other tallgrass prairie communities (mesic prairie and wet-mesic prairie), well over 99% of this prairie type has been destroyed.

3.3.3.3.2 Vertebrate Species of Greatest Conservation Need Associated with Dry-Mesic Prairie

Thirty-nine vertebrate Species of Greatest Conservation Need were identified as moderately or significantly associated with dry-mesic prairie (Table 3-84).

Table 3-84. Vertebrate Species of Greatest Conservation Need that are (or historically were) moderately or significantly associated with dry-mesic prairie communities.

Species Significantly Associated with Dry-Mesic Prairie
Birds
Greater Prairie-chicken
Upland Sandpiper
Barn Owl
Dickcissel
Grasshopper Sparrow
Henslow's Sparrow
Bobolink
Eastern Meadowlark
Western Meadowlark
Herptiles
Western Slender Glass Lizard
Prairie Ringneck Snake
Bullsnake
Butler's Garter Snake
Eastern Massasauga Rattlesnake
Mammals
White-tailed Jackrabbit
Franklin's Ground Squirrel
Prairie Vole
Species Moderately Associated with Dry-Mesic Prairie
Birds
Blue-winged Teal
Northern Harrier
Sharp-tailed Grouse
Northern Bobwhite
American Golden Plover
Marbled Godwit
Buff-breasted Sandpiper
Short-eared Owl
Willow Flycatcher
Brown Thrasher
Loggerhead Shrike
Bell's Vireo
Field Sparrow
Vesper Sparrow
Herptiles
Wood Turtle
Blanding's Turtle
Ornate Box Turtle
Northern Prairie Skink
Yellow-bellied Racer
Black Rat Snake
Western Ribbon Snake
Timber Rattlesnake

In order to provide a framework for decision-makers to set priorities for conservation actions, the species identified in Table 3-84 were subject to further analysis. The additional analysis identified the best opportunities, by Ecological Landscape, for protection, restoration, and/or management of both dry-mesic prairie and associated vertebrate Species of Greatest Conservation Need. The steps of this analysis were:

- Each species was examined relative to its probability of occurrence in each of the 16 Ecological Landscapes in Wisconsin. This information was then cross-referenced with the opportunity for protection, restoration, and/or management of dry-mesic prairie in each of the Ecological Landscapes (Tables 3-85 and 3-86).

- Using the analysis described above, a species was further selected if it had both a significant association with dry-mesic prairie and a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of dry-mesic prairie. These species are shown in Figure 3-14.

Table 3-85. Vertebrate Species of Greatest Conservation Need that are (or historically were) *significantly* associated with dry-mesic prairie communities and their association with Ecological Landscapes that support dry-mesic prairie.

Dry-Mesic Prairie

Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Birds (9)*									Herptiles (5)					Mammals (3)		
	Greater Prairie-chicken	Upland Sandpiper	Barn Owl	Dickcissel	Grasshopper Sparrow	Henslow's Sparrow	Bobolink	Eastern Meadowlark	Western Meadowlark	Western Slender Glass Lizard	Prairie Ringneck Snake	Bullsnake	Butler's Garter Snake	Eastern Massasauga Rattlesnake	White-tailed Jackrabbit	Franklin's Ground Squirrel	Prairie Vole
MAJOR																	
Southeast Glacial Plains																	
Southwest Savanna																	
Western Coulee and Ridges																	
IMPORTANT																	
Central Sand Plains																	
Western Prairie																	
PRESENT (MINOR)																	
Central Sand Hills																	
Southern Lake Michigan Coastal																	

Color Key

= **HIGH probability the species occurs in this Ecological Landscape**

= **MODERATE probability the species occurs in this Ecological Landscape**

= **LOW or NO probability the species occurs in this Ecological Landscape**

*** The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.**

Table 3-86. Vertebrate Species of Greatest Conservation Need that are (or historically were) *moderately* associated with dry-mesic prairie communities and their association with Ecological Landscapes that support dry-mesic prairie.

Dry-Mesic Prairie	Birds (14)*														Herptiles (8)							
Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Blue-winged Teal	Northern Harrier	Sharp-tailed Grouse	Northern Bobwhite	American Golden Plover	Marbled Godwit	Buff-breasted Sandpiper	Short-eared Owl	Willow Flycatcher	Brown Thrasher	Loggerhead Shrike	Bell's Vireo	Field Sparrow	Vesper Sparrow	Wood Turtle	Blanding's Turtle	Ornate Box Turtle	Northern Prairie Skink	Yellow-bellied Racer	Black Rat Snake	Western Ribbon Snake	Timber Rattlesnake
MAJOR																						
Southeast Glacial Plains	■	■		▒	■	▒	■	■	■	■	▒	▒	■	■		■	■		▒			
Southwest Savanna	▒	▒		■	▒		▒	■	■	■	▒	■	■	■		■	■		■			▒
Western Coulee and Ridges	■	■		■	▒		▒	▒	■	■		■	■	■	■	■	■	■	■	■		■
IMPORTANT																						
Central Sand Plains	■	■	▒		▒			■	■	■			■	■	■	■			▒			
Western Prairie	■	■			▒	■	▒	▒	■	■	■		■	■	■	■		■	▒			■
PRESENT (MINOR)																						
Central Sand Hills	■	■		■	▒			▒	■	■			■	■		■	■		▒			
Southern Lake Michigan Coastal	▒	▒				▒	■	▒	■	■		▒	■	■		■						

*** The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.**

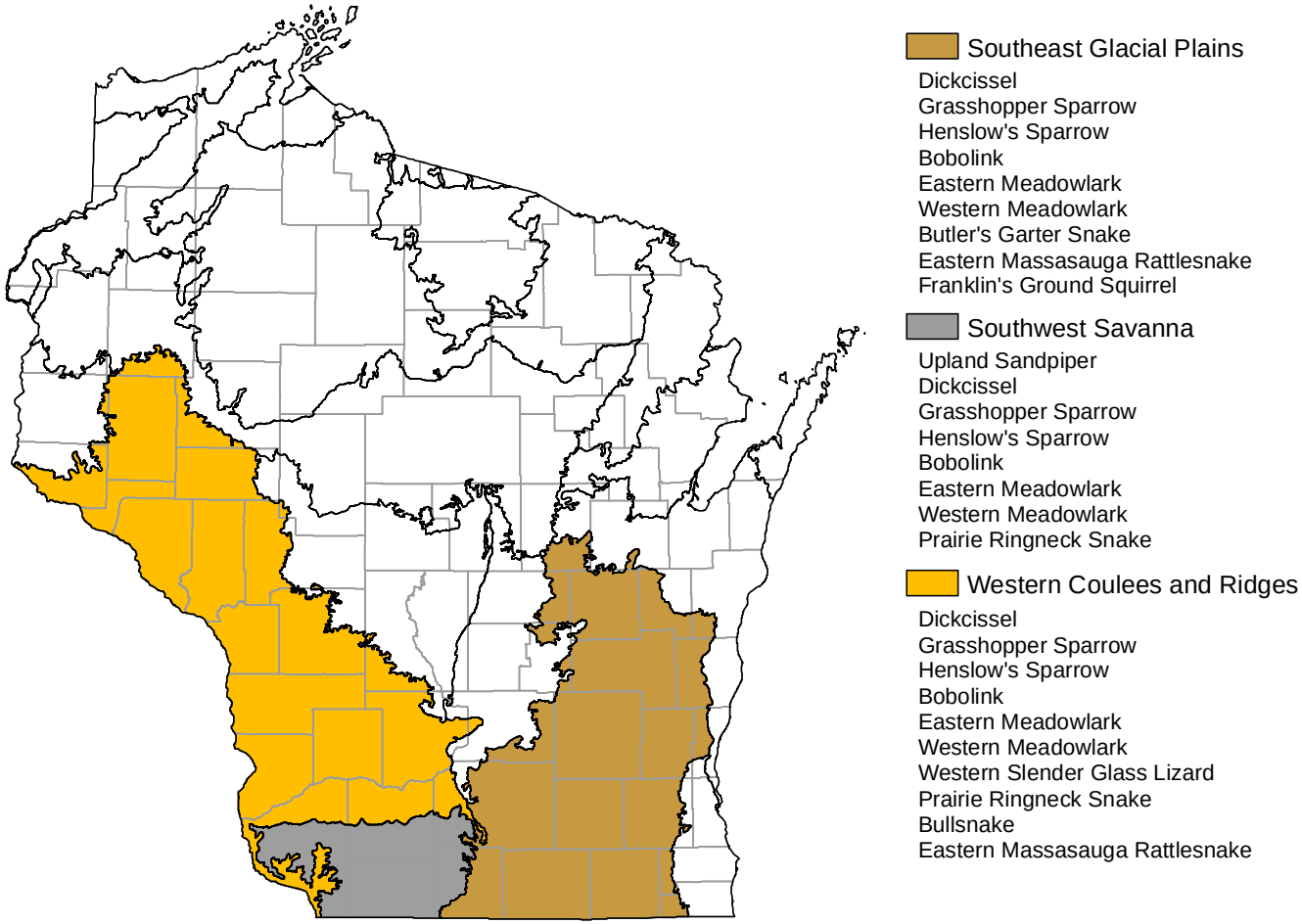
Color Key

■ = **HIGH probability the species occurs in this Ecological Landscape**

▒ = **MODERATE probability the species occurs in this Ecological Landscape**

□ = **LOW or NO probability the species occurs in this Ecological Landscape**

Figure 3-14. Vertebrate Species of Greatest Conservation Need that have ***both* a significant association with dry-mesic prairie ***and*** a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of dry-mesic prairie.**



3.3.3.3.3 Threats and Priority Conservation Actions for Dry-Mesic Prairie

3.3.3.3.3.1 Statewide Overview of Threats and Priority Conservation Actions for Dry-Mesic Prairie

The following list of threats and priority conservation actions were identified for dry-mesic prairie in Wisconsin. The threats and priority conservation actions described below apply to all of the Ecological Landscapes in Section 3.3.3.3.3.2 unless otherwise indicated.

Threats and Issues

- Most remnants are small and isolated, and often restricted to narrow rights-of-way, which can make management difficult.
- Managing for fire-sensitive invertebrates is needed but that can complicate vegetation management. Lack of fire is a problem because of the encroachment of woody plants and spread of invasive species.
- Invasive plants are a problem when they out-compete native species. Among the serious weeds in this type are non-native grasses such as smooth brome, Kentucky bluegrass, and Canada bluegrass, and other forbs including crown vetch, spotted knapweed, sweet clovers, and wild parsnip.
- Vegetation diversity may be declining at both the species and genetic levels.
- Grazing can cause simplification by reducing the abundance and diversity of native plants and encouraging the expansion of invasive plants.
- Housing developments and urban expansion can limit the opportunity to manage with prescribed fire and contribute to isolation effects.
- More information is needed to manage the natural variability of the community type.
- Conflicts sometimes exist between forest or grassland objectives.
- Where this type is limited to rights-of-way between agricultural fields, herbicide drift, or sometimes the direct application of herbicides to the right-of-way, can be a serious threat.

Priority Conservation Actions

- Manage in a complex of other prairie types, surrogate grasslands, savanna, or oak forest.
- Preserve large grassland sites wherever they exist, and protect prairie remnants within these large sites.
- Limit additional development on and around restorable sites and areas where connectivity between remnants could be feasible by acquisition, conservation easements, providing landowner incentives, or other means.
- Restoration of overgrown sites is needed.
- Promote private management (e.g., Prairie Enthusiasts) of small sites where possible, and encourage landowners who wish to econstructrestore prairies in appropriate landscapes on former farmland.
- Develop and offer incentives to preserve, manage, or restore this community type.
- Develop educational tools and demonstration areas that promote the benefits and safe use of prescribed fire, and address liability concerns.
- Follow existing management guidelines or screening guidance for prescribed burning to minimize negative impacts on sensitive species.
- Grazing may not be appropriate in high-quality remnants as they are fragile, and grazing typically increases non-native flora at the expense of the natives.
- In surrogate prairie grasslands around remnants, grazing can be used judiciously at certain times to accommodate some grassland birds. Care should be taken not to eliminate palatable native plants, if any. More information is needed on proper cattle stocking density and timing of grazing to prevent loss of sensitive plants and disruption of nesting birds.

- Maintain connectivity among sites for mammals, birds, reptiles and invertebrates where possible.
- Continue and support research to find biocontrols for invasives; control spread of new invasives.
- Monitor prairie and grassland sites to determine whether management is maintaining native diversity.

3.3.3.3.3.2 Additional Considerations for Dry-Mesic Prairie by Ecological Landscape

Special considerations have been identified for those Ecological Landscapes where major or important opportunities for protection, restoration, and/or management of dry-mesic prairie exist. Those considerations are described below and are in addition to the statewide threats and priority conservation actions for dry-mesic prairie found in Section 3.3.3.3.3.1.

Additional Considerations for Dry-Mesic Prairie in Ecological Landscapes with ***Major*** Opportunities for Protection, Restoration, and/or Management

Southeast Glacial Plains

Historically common in this Ecological Landscape, the type is now very limited in extent, but there are more opportunities here than in most other Ecological Landscapes. The relatively flat topography of the Ecological Landscape led to extensive conversion of prairie to agriculture. Areas that are sandy, relatively infertile, steeply sloping, or where bedrock is near the surface, were less likely to have been plowed. Such sites are where most remnants are found. Most examples are along the southeastern edge of the Ecological Landscape near the relatively rugged Kettle Moraine, and in the southernmost portion of the Ecological Landscape that was not glaciated during the Wisconsin Ice Age. Elsewhere, most of the remnants are restricted to rights-of-way. Urban expansion is occurring in some locations, especially near larger cities, and can further impact prairie remnants and limit the opportunity to manage with prescribed fire.

Many dry-mesic prairie remnants exist, however acreage is not extensive (e.g., Westport Drumlin Prairie (Dane County), Arlington Prairie and Hawk Hill (Columbia County), Muralt Bluff Prairie and Oliver Prairie (Green County)). Most of the high-quality remnants are being protected and managed appropriately. Opportunities to connect remnants and expand grasslands that can be managed compatibly with prairies should be sought. Grazing is not occurring on the quality remnants at this time.

Southwest Savanna

Historically common in this Ecological Landscape, the type is now limited in extent. Conversion to agriculture has occurred throughout the Ecological Landscape, but there are important opportunities for restoration in large acreages of pasture that have never been plowed. Methods of grazing that are compatible with grassland management objectives should be studied and developed. Large-scale prescribed burning, or other means of reducing woody vegetation or weeds, may be needed. Urban expansion is occurring in some locations and can impact prairie remnants and limit the opportunity to manage with prescribed fire. Underwood Prairie (Iowa County), Mud Branch Prairie (Lafayette County), and Green's Cemetery Prairie (Green County) are examples of this type.

Western Coulees and Ridges

Historically common in this Ecological Landscape, the type is now limited in extent. It is occasionally found on wider ridge tops, below dry prairies on lower hill slopes, and on terraces along larger rivers. The flatter topography where this community type occurred was more extensively converted to agriculture and residential development, but there are still important opportunities for restoration. Urban expansion is occurring in locations around larger cities. Examples of this type are found at Black Earth Prairie State

Natural Area (Dane County), Avoca Prairie State Natural Area (Iowa County), Midway Railroad Prairie State Natural Area (La Crosse County), La Crosse River Trail Prairie State Natural Area (Monroe County), and Snake Bluff (Juneau County).

Additional Considerations for Dry-Mesic Prairie in Ecological Landscapes with ***Important*** Opportunities for Protection, Restoration, and/or Management

Central Sand Plains

The type is very rare in the Ecological Landscape. Most of the few occurrences that have been documented are in rights-of-way, and have been seriously degraded by the encroachment of woody plants and colonization by invasive weeds. There may be limited opportunities for restoration and expansion in this Ecological Landscape, but the priority and feasibility of these have not been adequately assessed. An example is found at Mill Bluff State Park (Juneau County).

Western Prairie

The type is extremely rare in the Ecological Landscape because of the almost total conversion of prairie to agricultural uses. Urban expansion is occurring and increasing rapidly throughout the Ecological Landscape. A few sites on Waterfowl Production Areas are suited for restoration. Examples are found at Bass Lake Prairie, Ulrich Prairie, and Ogburns Prairie (St. Croix County).